

**REMARKS**

Reconsideration of the application identified in caption and in light of the remarks which follow, is respectfully requested.

At the outset, Applicants thank Examiner Hon of the U.S. Patent and Trademark Office for her time and consideration in recently discussing the outstanding rejections with Applicants' representative. The present paper is being filed in accordance with the Examiner's suggestion to file a written response to provide her with the opportunity to further consider the issues raised during the discussion. Applicants respectfully request further consideration of such issues and withdrawal of the outstanding rejections for at least the following reasons.

In the Official Action, claims 15-18, 22-25 and 27 stand rejected under 35 U.S.C. §103(a) as being obvious over U.S. Patent No. 6,383,559 (*Nakamura et al*) in view of U.S. Patent No. 5,909,314 (*Oka et al*). Claim 19 stands rejected under 35 U.S.C. §103(a) as being obvious over *Nakamura et al* in view of *Oka et al* and further in view of U.S. Patent No. 6,210,858 (*Yasuda et al*). Claims 20 and 21 stand rejected under 35 U.S.C. §103(a) as being obvious over *Nakamura et al* in view of *Oka et al* and further in view of U.S. Patent No. 6,254,973 (*Yoshida et al*). Claim 26 stands rejected under 35 U.S.C. §103(a) as being obvious over *Nakamura et al* in view of *Oka et al* and further in view of U.S. Patent No. 6,633,352 (*Yamaguchi et al*) and U.S. Patent No. 6,181,400 (*Yang*). Claim 28 stands rejected under 35 U.S.C. §103(a) as being obvious over *Nakamura et al* in view of *Oka et al* and further in view of U.S. Patent No. 6,633,352 (*Yamaguchi et al*). Withdrawal of the above rejections is respectfully requested for at least the following reasons.

According to one aspect, independent claim 15 is directed to an antireflection film comprising: a transparent support; and as an outermost layer, a low refractive index layer

containing a fluorine-containing polymer, wherein the low refractive index layer comprises at least one inorganic fine particle having an average particle size of 30 to 100% of the thickness of the low refractive index layer, and wherein the low refractive index layer further comprises at least one silica fine particle having a particle size of less than 25% of the thickness of the low refractive index layer.

*Nakamura et al* relates to an anti-reflection film comprising a low refractive index layer which comprises a polymer binder and particles which are so deposited to superpose at least one micro particle on another micro particle, to form micro voids surrounded by the micro particles, said micro particles having a mean particle size of 5 to 200 nm (col. 2, lines 36-42). *Nakamura et al* discloses that a polymer binder adheres the micro particles to keep the porous structure of the low refractive index layer (col. 5, lines 39-41). *Nakamura et al* further discloses that the refractive index of the low refractive index layer can be lowered by increasing the volume fraction of the micro voids (col. 4, lines 26-29). At page 2 of the Official Action, the Patent Office has relied on *Nakamura et al* for disclosing the densely packed configuration of micro particles depicted in Figure 1, to show that the average particle size is 50% of the thickness of the low refractive index layer.

*Nakamura et al* does not disclose or suggest each feature recited in independent claim 15. For example, *Nakamura et al* does not disclose or suggest a low refractive index layer that comprises at least one inorganic fine particle having an average particle size of 30 to 100% of the thickness of the low refractive index layer and at least one silica fine particle having a particle size of less than 25% of the thickness of the low refractive index layer, as recited in claim 15. These deficiencies of *Nakamura et al* are acknowledged by the Patent Office at pages 2 and 3 of the Official Action.

*Oka et al* fails to cure the above-described deficiencies of *Nakamura et al*. In this regard, the Patent Office has relied on *Oka et al* for its disclosure of using inorganic fillers such as silica to prevent the settling of matte material in a coating solution (Official Action at page 3). However, absent an improper resort to Applicants' own disclosure, one of ordinary skill in the art would not have been motivated to combine *Nakamura et al* and *Oka et al* in the manner suggested in the Official Action.

As discussed above, *Nakamura et al* discloses an anti-reflection film that has micro voids formed by superposing at least two particles one on another (col. 2, lines 38-41; col. 3, lines 66-67). One of ordinary skill in the art would not have been motivated to include the inorganic fillers disclosed by *Oka et al* to prevent settling of the micro particles disclosed by *Nakamura et al*, in view of *Nakamura et al*'s disclosure that the micro particles are on each other and bound together with a binder. As discussed in *Nakamura et al*, it is this densely packed configuration of the micro particles that creates the micro voids desired by *Nakamura et al*. Thus, at best, *Nakamura et al* suggests that the settling of the micro particles is in fact desirable in order to form the densely packed configuration of the micro particles, contrary to the Patent Office's assertion. Simply put, in light of the densely packed configuration of the micro particles disclosed by *Nakamura et al*, one of ordinary skill in the art would not have been motivated to employ the inorganic fillers disclosed by *Oka et al* for the purpose of preventing settling of such micro particles.

Furthermore, it is noted that *Oka et al* discloses an antireflection film having an antiglare layer and a low refractive index layer (see abstract). *Oka et al* further discloses that the inorganic fillers are employed in the antiglare layer thereof, and has no disclosure or suggestion of employing such inorganic fillers in the low refractive index layer thereof. Accordingly, one of ordinary skill in the art would not have been motivated to employ the

inorganic fillers which *Oka et al* disclosing using in an antiglare layer, in the low refractive index layer of *Nakamura et al*.

For at least the above reasons, withdrawal of the above rejection based on the alleged combination of *Nakamura et al* and *Oka et al* is respectfully requested.

*Yasuda et al*, *Yoshida et al*, *Yamaguchi et al* and *Yang et al* have been relied on by the Patent Office for the reasons discussed at pages 6-11 of the Official Action. However, like *Nakamura et al*, the above secondary applied documents fail to disclose or suggest a low refractive index layer that comprises at least one inorganic fine particle having an average particle size of 30 to 100% of the thickness of the low refractive index layer and at least one silica fine particle having a particle size of less than 25% of the thickness of the low refractive index layer, as recited in independent claim 15.

For at least the above reasons, it is apparent that no *prima facie* case of obviousness has been established. Accordingly, withdrawal of the §103(a) rejections is respectfully requested.

From the foregoing, further and favorable action in the form of a Notice of Allowance is believed to be next in order, and such action is earnestly solicited. If there are any questions concerning this paper or the application in general, the Examiner is invited to telephone the undersigned.

Respectfully submitted,

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